W2-F

Symposium: Advances in the use of Mechanistic Data in Evaluating Carcinogenic Risk

Room: Nautilus 1 10:30 am–12:00 pm

Chair(s): Rita Schoeny, Mary Manibusan

Over the past 20 years significant advances have been made in our knowledge of the biological pathways involved in carcinogenesis. Concomitantly, as technologies have progressed, increasingly complex and richer data streams from 21st century exposure/dosimetry methods and mechanistic assays (e.g., in vitro, high throughput and high content technologies) have become available. These technologies create both new opportunities and challenges for interpreting and integrating results into evaluations of potential carcinogenic risk of chemicals. This session will focus on three different applications of these new data streams as a basis for: 1) developing predictive models for identifying carcinogens; 2) categorizing scientific findings relevant to cancer mechanisms for incorporation into hazard identification/categorization decision making; and 3) formulating a framework that employs causality elements for establishing mode(s) of action and human relevance. The panel discussion will focus on the degree of scientific confidence in using various methods to establish causation between key events and the adverse health outcome in the context of regulatory decision making. This session will provide a critical evaluation and invite the audience to actively participate in a collective discussion of whether the state of the science of biological pathways is sufficiently advanced to enable the use of these approaches in the risk characterization of a chemical's probability to elicit cancer and other related health effects.

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- **W2-F.1 10:30 am How Well Do High Throughput Screening (HTS) Assay Data Predict in vivo Rodent Carcinogenicity of Pesticides?** *Cox TL, Popken DA, Kaplan AM, Plunkett LM*, Becker RA; Cox Associates*

- **W2-F.2 10:50 am Key Characteristics of Carcinogens as a Basis for Organizing Data on Mechanisms of Carcinogenesis.** *Smith MT, Guyton KZ, Gibbons CF, Fritz JM, Portier CJ, Rusyn I, DeMarini DM, Caldwell JC, Kavlock RJ, Cogliano VJ*; United States Environmental Protection Agency*

- **W2-F.3 11:10 am A Method for Quantitative Scoring of Causality for Side-by Side Comparison of Confidence for Alternative MOAs (Including Case Examples).** *Becker RA*, Manibusan MK; American Chemistry Council*